



US009409847B2

(12) **United States Patent**  
**Bal et al.**

(10) **Patent No.:** **US 9,409,847 B2**  
(45) **Date of Patent:** **Aug. 9, 2016**

(54) **CATALYST FOR SINGLE STEP  
CONVERSION OF GLYCEROL TO ACRYLIC  
ACID AND PROCESS FOR THE  
PREPARATION THEREOF**

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(\*) Notice: Subject to any disclaimer, the term of this  
patent is extended or adjusted under 35  
U.S.C. 154(b) by 167 days.

(21) Appl. No.: **14/072,916**

(22) Filed: **Nov. 6, 2013**

(65) **Prior Publication Data**  
US 2014/0128632 A1 May 8, 2014

(30) **Foreign Application Priority Data**  
Nov. 7, 2012 (IN) ..... 3442/DEL/2012

(51) **Int. Cl.**  
**B01J 23/889** (2006.01)  
**B01J 35/00** (2006.01)  
**B01J 37/00** (2006.01)  
**C07C 51/285** (2006.01)  
**B01J 37/03** (2006.01)  
**B01J 37/10** (2006.01)

(52) **U.S. Cl.**  
CPC ..... **C07C 51/285** (2013.01); **B01J 23/8892**  
(2013.01); **B01J 35/002** (2013.01); **B01J**  
**37/0018** (2013.01); **B01J 37/031** (2013.01);  
**B01J 37/10** (2013.01)

(58) **Field of Classification Search**  
CPC .. B01J 23/8892; B01J 35/002; B01J 37/0018;  
B01J 37/031; B01J 37/10; C07C 51/285  
See application file for complete search history.

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(57) **ABSTRACT**

The present invention provides a process and a solid catalyst  
for oxydehydration of glycerol to acrylic acid with H<sub>2</sub>O<sub>2</sub>  
under mild experimental condition at atmospheric pressure.  
The process provides a single step liquid phase selective  
oxidation glycerol to acrylic acid over nanocrystalline Cu  
supported  $\alpha$ -MnO<sub>2</sub> catalyst. The process provides glycerol  
conversion of 20-78% and selectivity of acrylic acid up to  
86%.

**8 Claims, 2 Drawing Sheets**